

# TC-FX430/FX433

## SERVICE MANUAL



Photo: TC-FX430

TC-FX430:  
*US Model*  
*Canadian Model*  
*AEP Model*  
*UK Model*

TC-FX433:  
*US Model*

### SPECIFICATIONS

Tape Transport Mechanism Type TCM-C80F30B

Recording system 4-track 2-channel stereo

Fast-forward and rewind time

Approx. 100 sec. (with C-60 cassette)

Blas frequency 105 kHz


Signal-to-noise ratio (NAB, at peak level)

DOLBY NR switch Cassette	OFF	B-TYPE ON	C-TYPE ON
TYPE IV (Sony METAL-ES)	58 dB	65 dB	71 dB
TYPE II (Sony UCX)	56 dB	63 dB	69 dB
TYPE I (Sony HF-S)	54 dB	61 dB	67 dB


Total harmonic distortion

1.0% (with Sony METAL-ES cassettes)

#### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

#### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

#### Frequency response

##### DOLBY NR OFF

- With TYPE IV cassette (Sony METAL-ES)

20 - 16,000 Hz

30 - 15,000 Hz ( $\pm 3$  dB)

30 - 13,000 Hz ( $\pm 3$  dB, 0 VU recording)

30 - 15,000 Hz (DIN)

- with TYPE II cassette (Sony UCX)

20 - 15,000 Hz

30 - 14,000 Hz ( $\pm 3$  dB)

30 - 14,000 Hz (DIN)

- With TYPE I cassette (Sony HF-S)

20 - 14,000 Hz

30 - 13,000 Hz (DIN)

#### Wow and flutter

0.08% WRMS (NAB)

$\pm 0.2\%$  (DIN)

#### Inputs

Microphone inputs (phone jacks)

Sensitivity 0.25 mV ( $-70$  dB)

For a low-impedance microphone

Line inputs (phone jacks)

Sensitivity 77.5 mV ( $-20$  dB)

Input impedance 47 kilohms

#### Outputs

Line outputs (phono jacks)

Output level 0.44 V ( $-5$  dB) at load impedance 47 kilohms.

Load impedance over 10 kilohms

Headphone output (stereo phone jack)

Output level  $-28$  dB at a load impedance of 8 ohms



STEREO CASSETTE DECK  
**SONY**®

TC

# TC-FX430/FX433

## General

### Power requirements

120 V ac, 60 Hz (US, Canadian model)

220 V ac, 50/60 Hz (AEP model)

240 V ac, 50 Hz (UK model)

### Power consumption

14 watts

### Dimensions

Approx. 430 × 105 × 250 mm (w/h/d)

(17 × 4<sup>1</sup>/<sub>4</sub> × 9<sup>7</sup>/<sub>8</sub> inches)

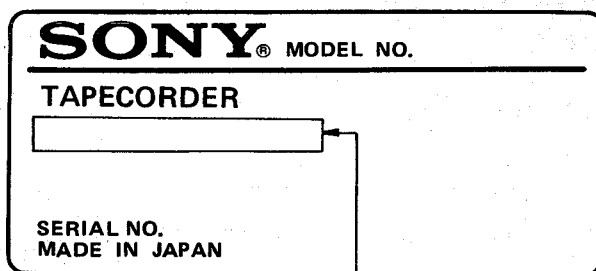
including projecting parts and controls

### Weight

Approx. 3.3 kg (7 lbs 5 oz)

## MODEL IDENTIFICATION

— Specification Label —



US, Canadian model: AC: 120 V 60 Hz 14 W

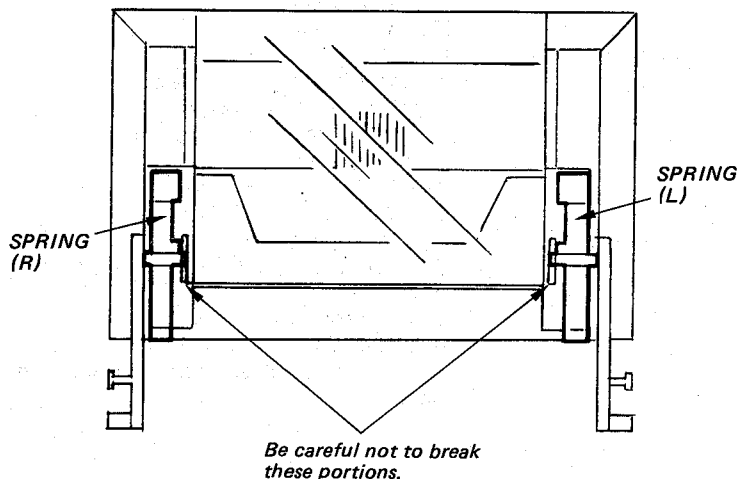
AEP model: AC: 220 V ~ 50/60 Hz 14 W

UK model: AC: 240 V ~ 50/60 Hz 14 W

## [Note On Repairing]

### • SPRING L/R

Spring (L) and (R) are similar in their shape as shown in figure below. Be careful when installing them.



## SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

## LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

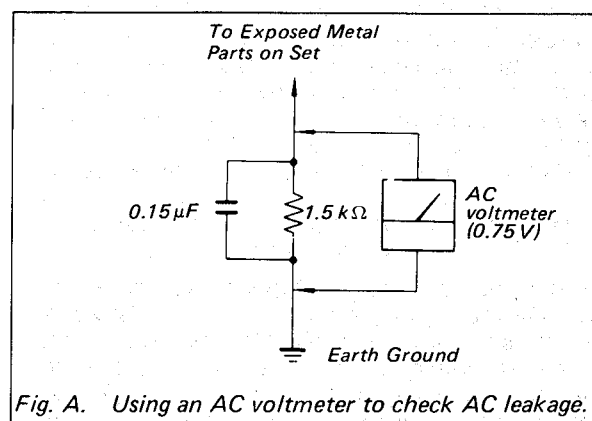


Fig. A. Using an AC voltmeter to check AC leakage.

# SECTION 1 OUTLINE

## FUNCTION OF CONTROLS

### FRONT PANEL

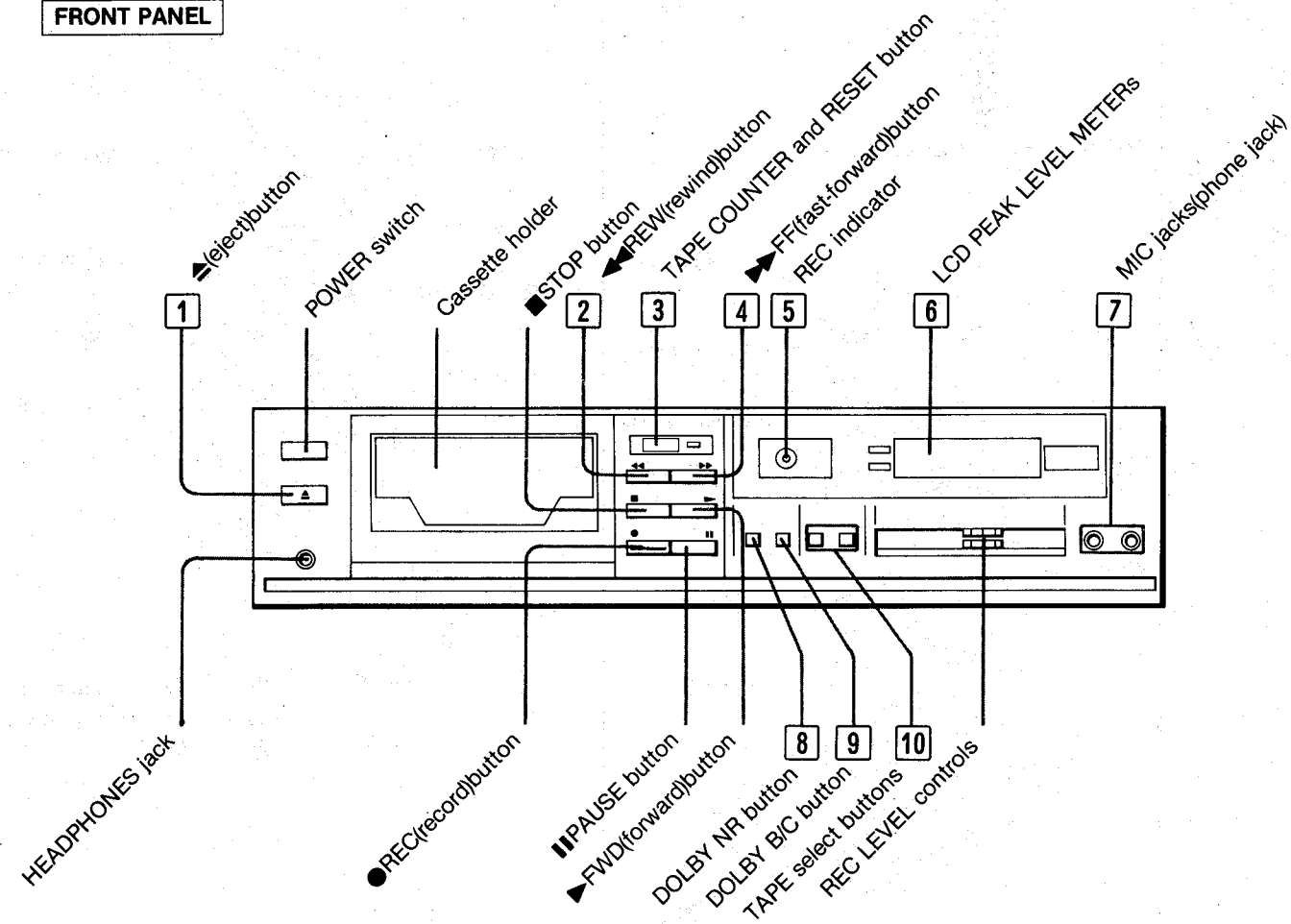
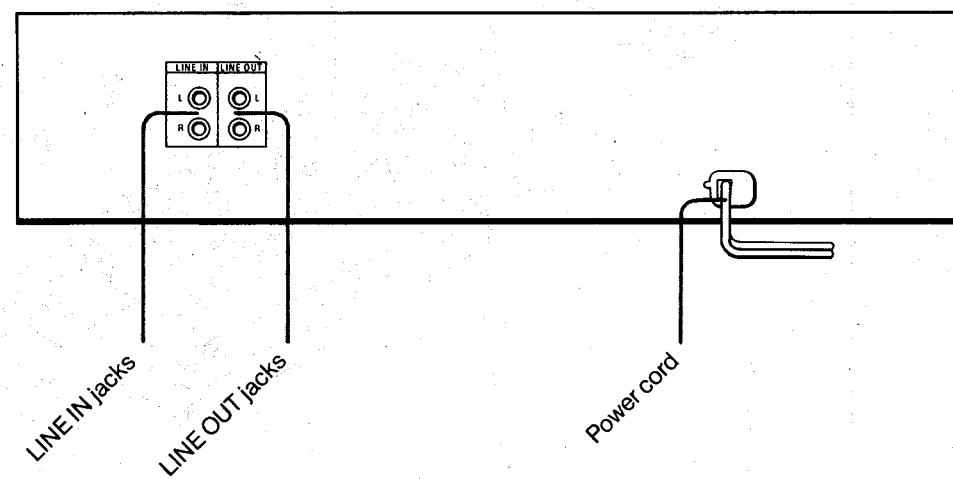
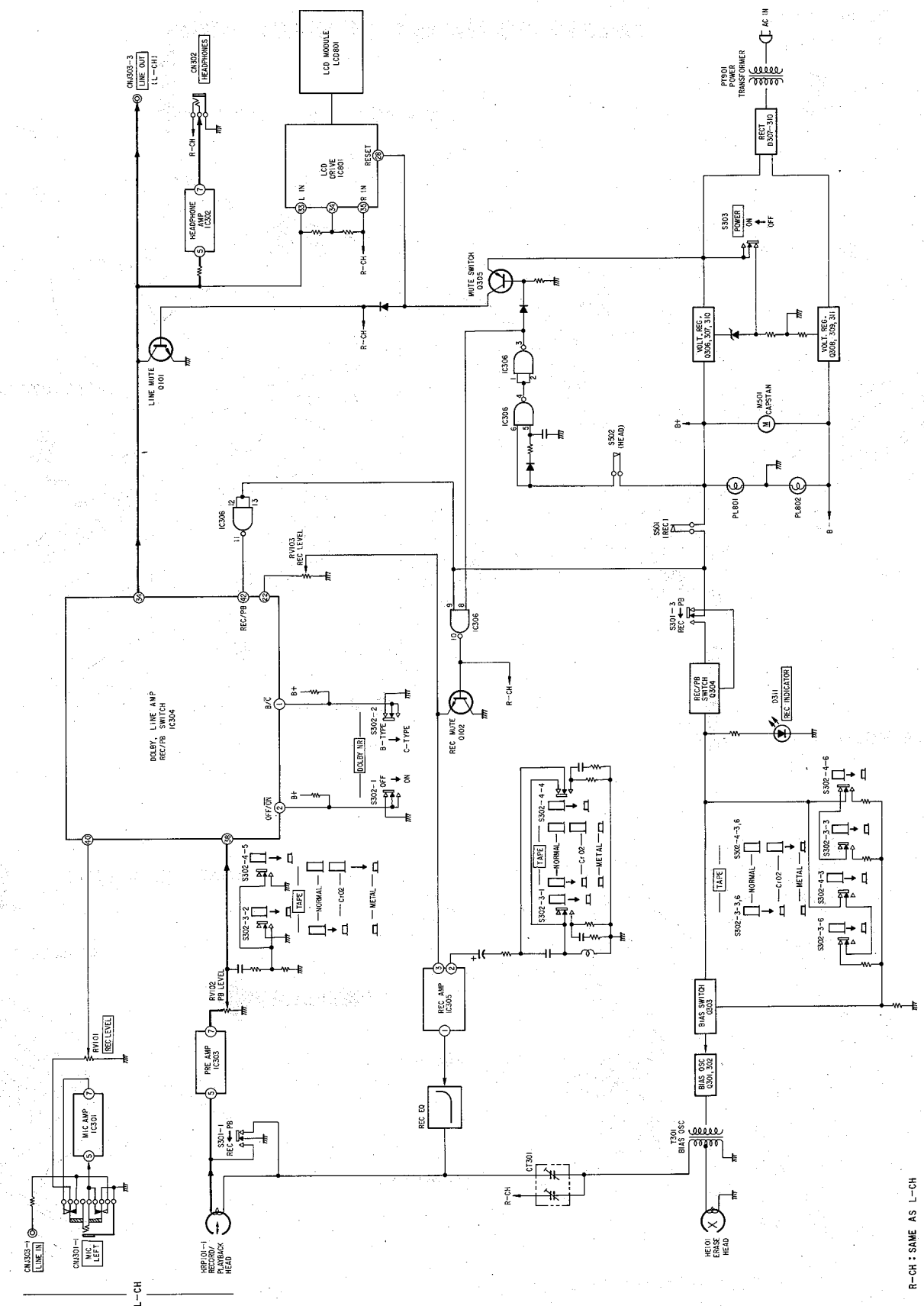


Illustration: TC-FX430

## REAR PANEL



### 1-1. BLOCK DIAGRAM

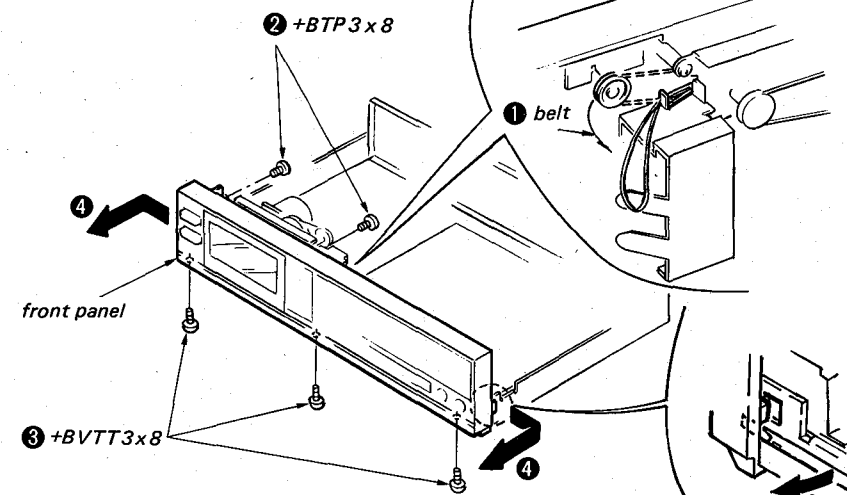


## SECTION 2 DISASSEMBLY

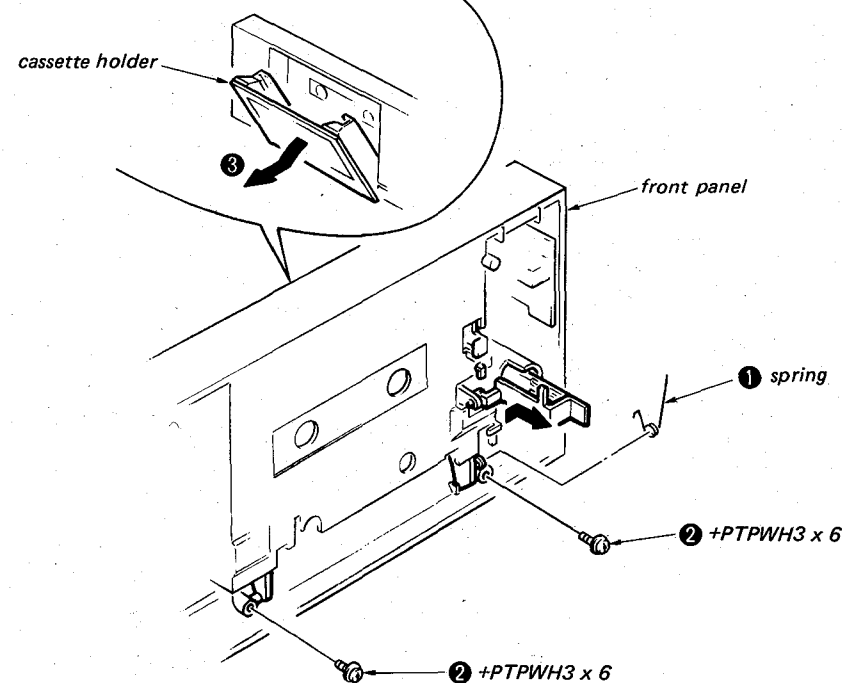
- Follow the disassembly procedure in the numerical order given.

Remove the case.  
(four screws)

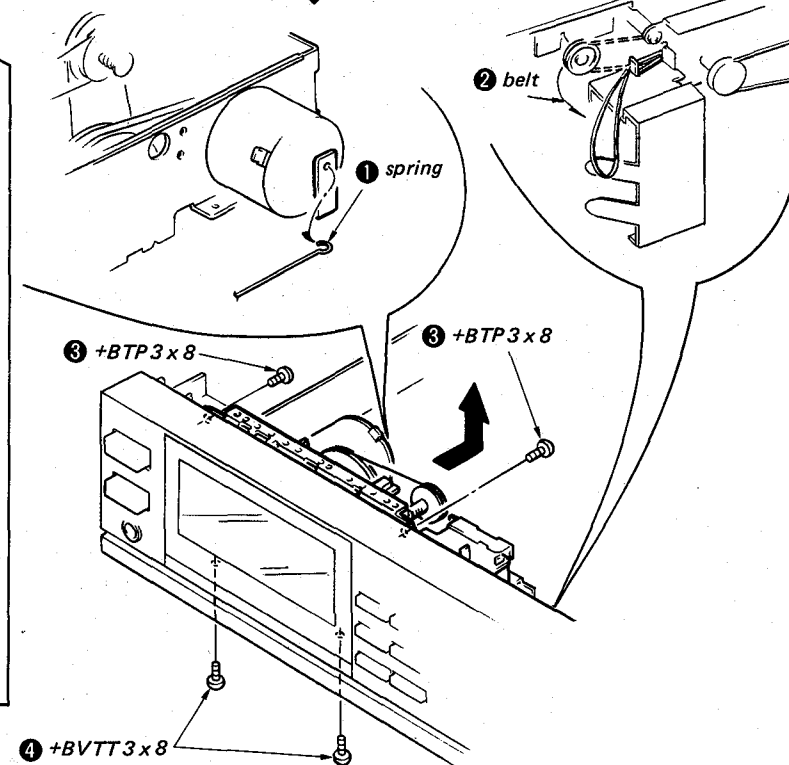
### FRONT PANEL



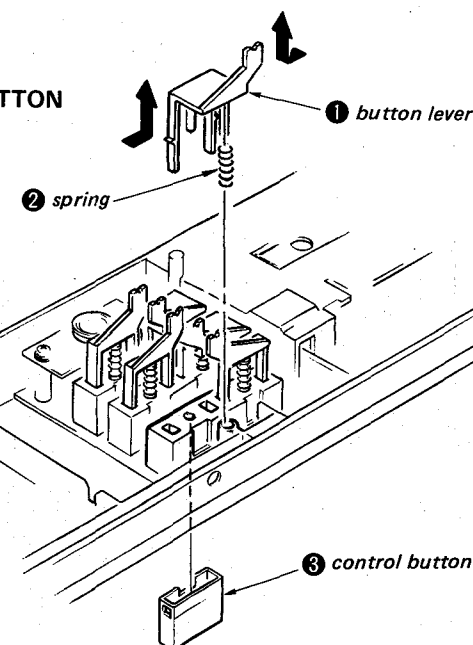
### CASSETTE HOLDER



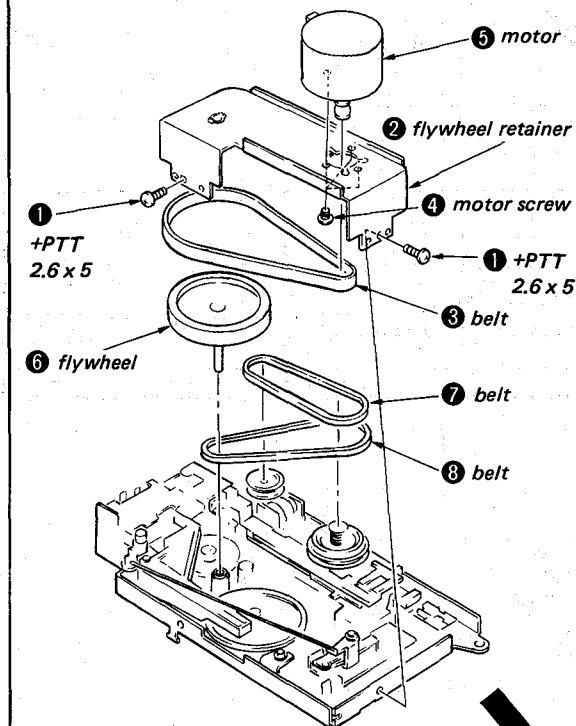
### TRANSPORT MECHANISM



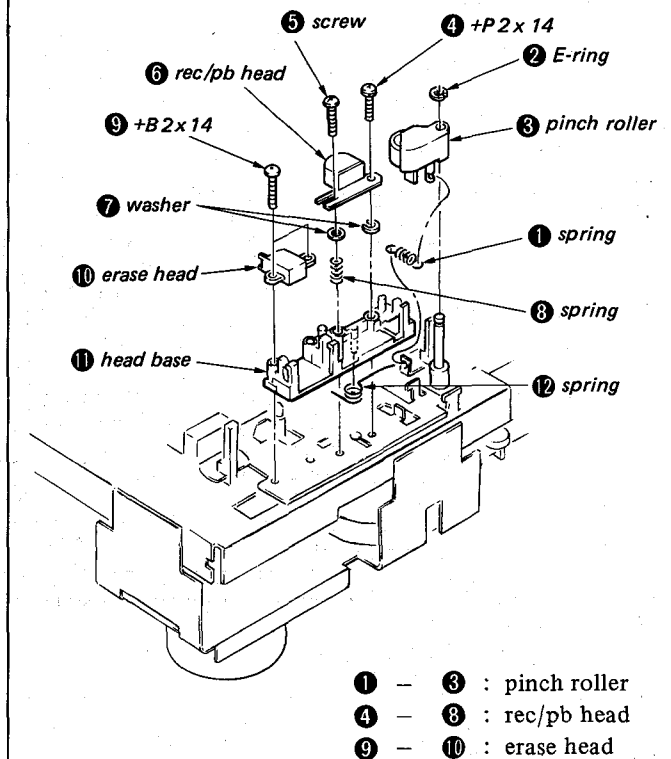
### CONTROL BUTTON



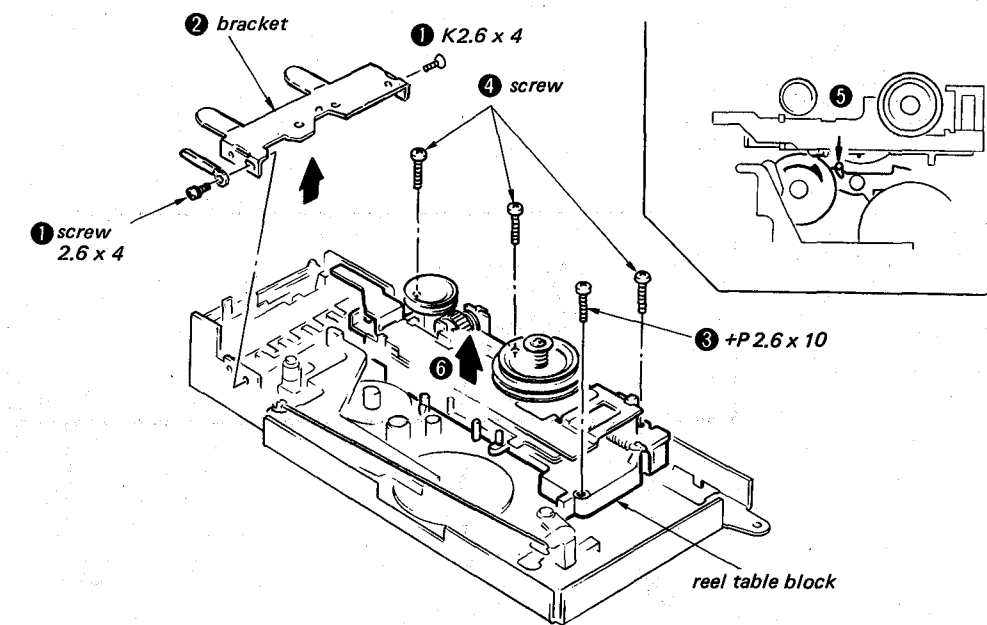
### MOTOR, FLYWHEEL, BELT



### REC/PB HEAD, ERASE HEAD, PINCH ROLLER



### REEL TABLE BLOCK





## SECTION 3 ADJUSTMENTS

### 3-1. MECHANICAL ADJUSTMENTS

No mechanical adjustments applied to this unit.

#### • Torque Measurement

Mode	Torque Meter	Torque
FWD	CQ-102C	40 to 70 g-cm (0.55 to 0.97 oz-inch)
FF	CQ-201B	70 to 150 g-cm (0.97 to 2.07 oz-inch)
REW	CQ-201B	70 to 150 g-cm (0.97 to 2.07 oz-inch)
FWD back tension	CQ-102C	2 to 6 g-cm (0.028 to 0.083 oz-inch)

### 3-2. ELECTRICAL ADJUSTMENTS

**Note:** The adjustment should be performed in the order given in this service manual.  
The adjustments should be performed for both L-CH and R-CH.

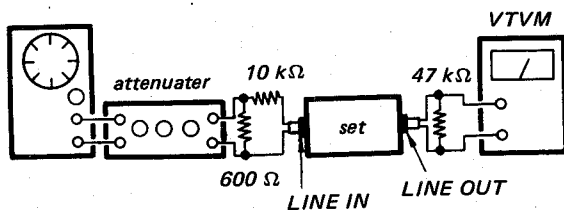
- Set the TAPE switches according to the tape as follows.

Tape	Tape Switch
CS-17	TYPE I NORMAL
CS-26	TYPE II CrO <sub>2</sub>
CS-40	TYPE IV METAL

- Switches and controls should be set as follows unless otherwise specified.  
DOLBY NR switch: OFF  
TAPE SELECT switch: TYPE I NORMAL

- Standard Record:  
Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

#### — Record Mode —



#### Standard Input Level

	MIC	LINE IN
source impedance	300 Ω	10 kΩ
input level	0.77 mV (−60 dB)	0.25 V (−10 dB)

#### Standard Output Level

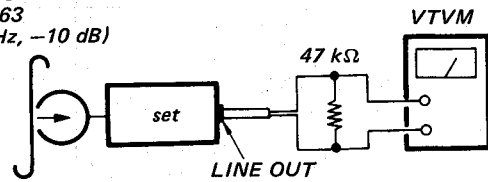
	HEADPHONES	LINE OUT
load impedance	8 Ω	47 kΩ
output level	31 mV (−28 dB)	0.435 V (−5 dB)

### Record/playback Head Azimuth Adjustment

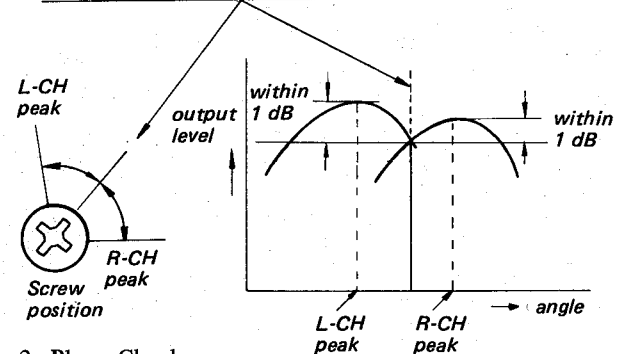
#### Procedure:

- Mode: playback

test tape  
P-4-A063  
(6.3 kHz, −10 dB)



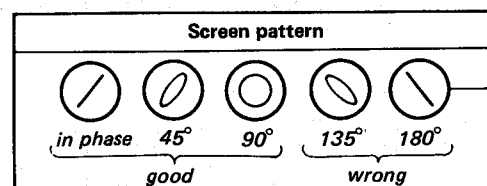
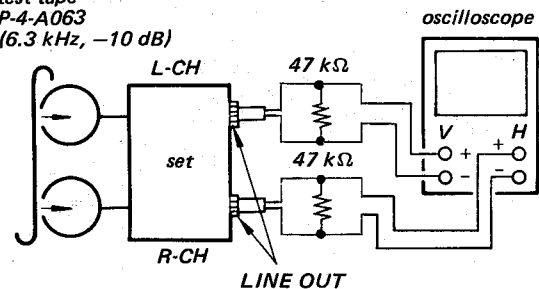
- Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1 dB.



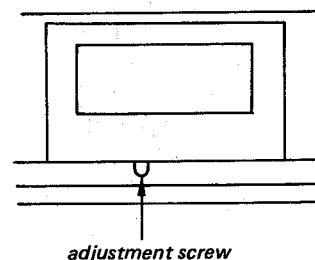
- Phase Check

Mode: playback

test tape  
P-4-A063  
(6.3 kHz, −10 dB)



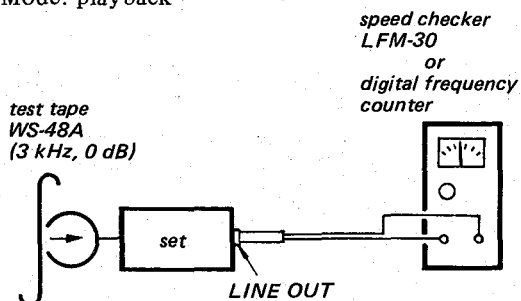
#### Adjustment Location:



## Tape Speed Adjustment

### Procedure:

Mode: playback

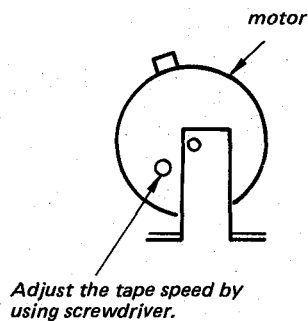


### Specification:

Speed checker	Digital frequency counter
$\pm 0.3\%$	2,990 to 3,010 Hz

Frequency difference between the beginning and the end of the tape should be within 0.8% (25 Hz).

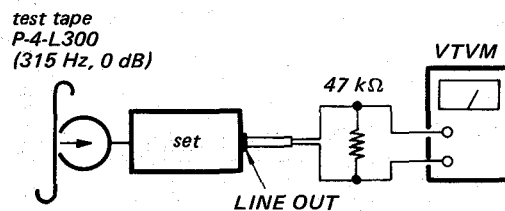
### Adjustment Location:



## Playback Level Adjustment

### Procedure:

Mode: playback



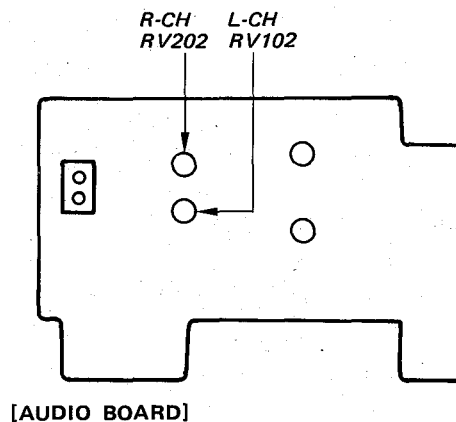
### Specification:

LINE OUT level: 0.46 to 0.41 V  
(-4.5 to -5.5 dB)

Level difference between channels:  
less than 0.5 dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

### Adjustment Location:



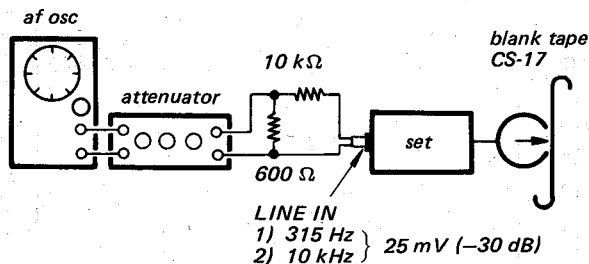
### Record Bias Adjustment

#### Setting:

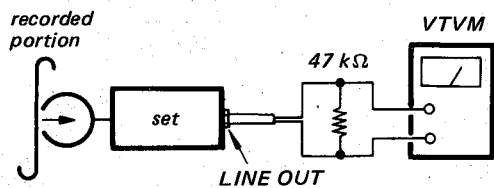
REC LEVEL control: standard record  
(See page 7)

#### Procedure:

1. Mode: record



2. Mode: playback



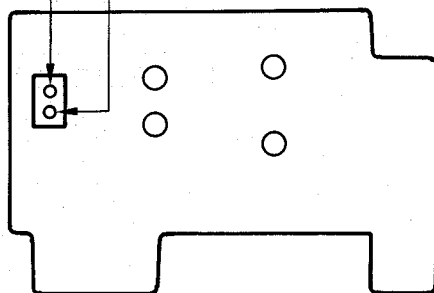
Play back the tape recorded in step 1.  
Confirm that the LINE OUT level of 10 kHz signal is 0 dB relative to that of 315 Hz. If not, adjust the CT301-1 (L-CH), CT301-2 (R-CH) and repeat steps 1 and 2.

#### Specification:

0 ±0.5 dB

#### Adjustment Location:

R-CH CT301-2 L-CH CT301-1



[AUDIO BOARD]

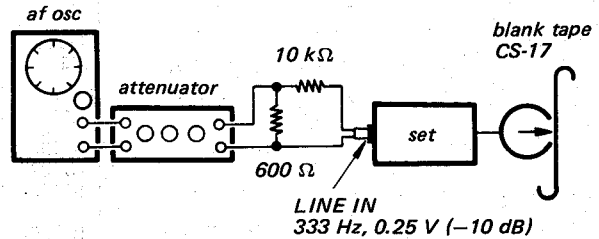
### Record Level Adjustment

#### Setting:

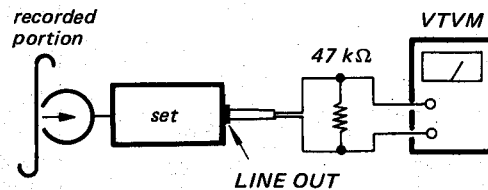
REC LEVEL control: standard record  
(See page 7)

#### Procedure:

1. Mode: record



2. Mode: playback

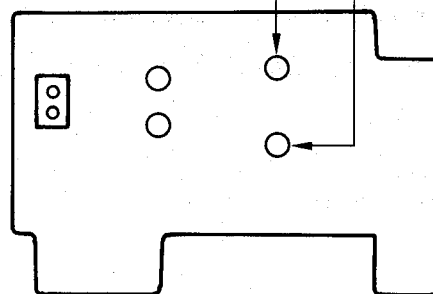


#### Specification:

LINE OUT level: 0.41 to 0.46 V  
(-5.5 to -4.5 dB)

#### Adjustment Location:

R-CH RV203 L-CH RV103



[AUDIO BOARD]

TC-FX430/FX433

4-1. MOUNTING DIAGRAM

- See page 16 for Semiconductor Lead Layouts.

Note on Schematic Diagram:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- Components for right channel have same values as for left channel. Reference numbers are coded from
  - $\Delta$ : internal component.
  - $\text{---}$ : B+ bus.
  - $\text{---}$ : B- bus.
  - $\text{---}$ : adjustment for repair.
- AC voltage readings in the bias oscillator with a VTVM.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50  $\text{k}\Omega/\text{V}$ ).
  - $\blacktriangleright$ : FWD  $\bullet$ : REC
- Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken to ground by using oscilloscope. Voltage variations may be noted due to normal production tolerances.
- $\text{---}$ : PLAYBACK signal path.
- $\text{---}$ : REC signal path.
- Switch

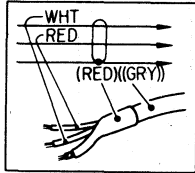
Ref. No.	Switch	Position
S301	REC/PB	PB
S302-1	DOLBY NR ON/OFF	OFF
S302-2	DOLBY NR B/C	B
S302-3, 4	TAPE	NORMAL
S303	POWER	OFF
S501	REC	OFF
S502	HEAD	OFF

Note: The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par un tramé et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Note on Mounting Diagram:

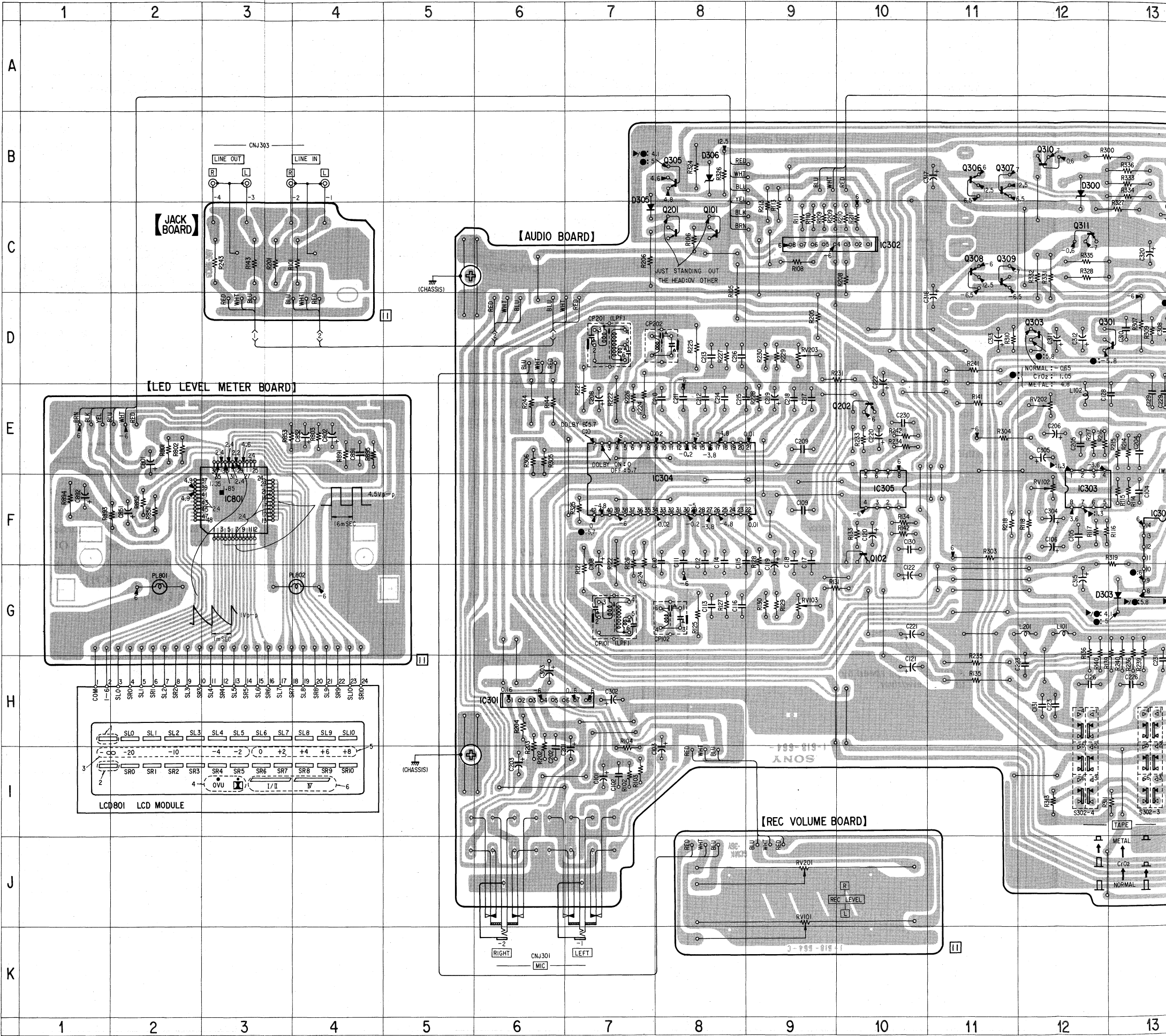
- Color code or sleeving over the end of the jacket.



- $\text{---}$ : parts extracted from the component side.
- $\text{---}$ : indicates side identified with part number.

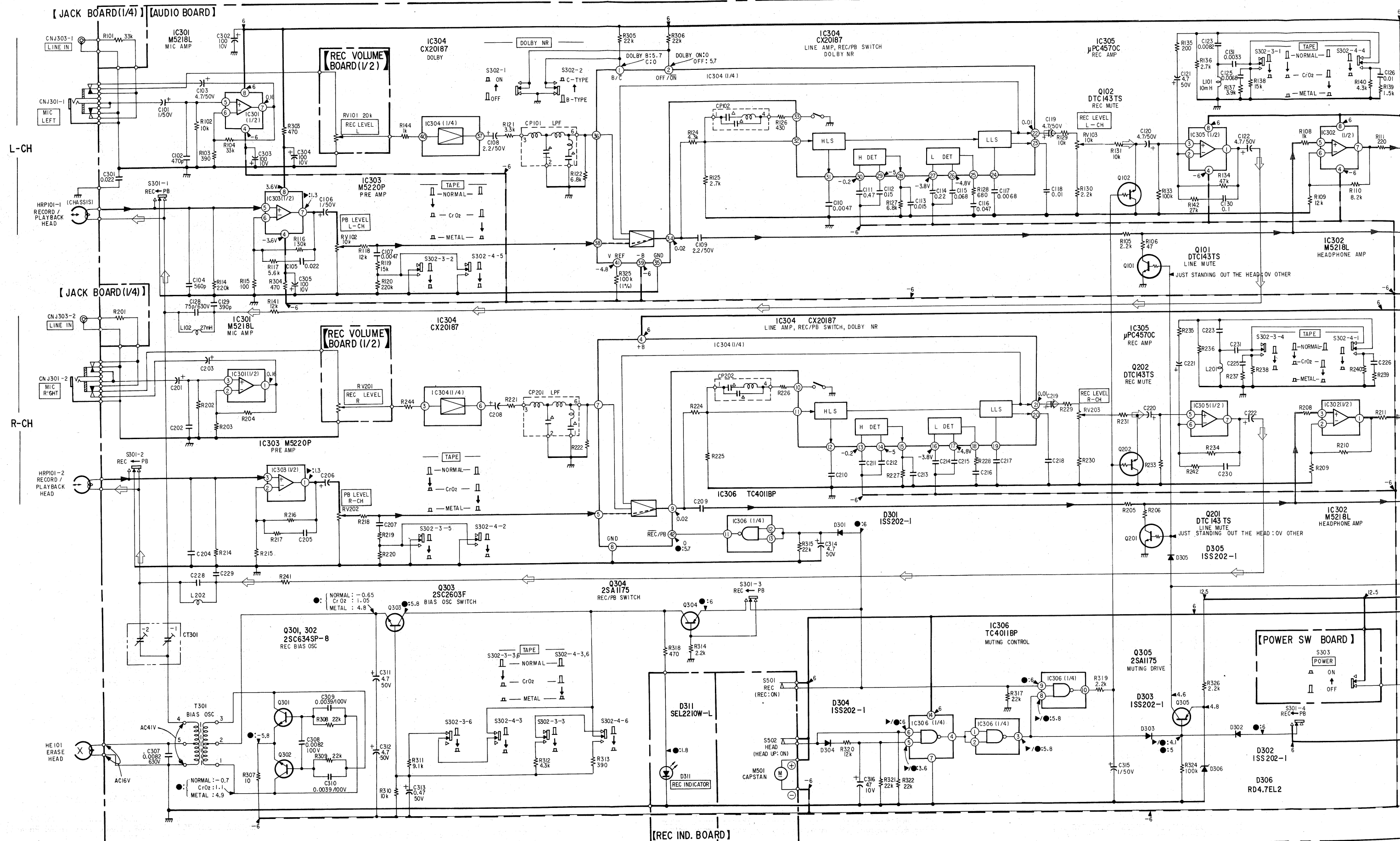
SECTION 4  
DIAGRAMS

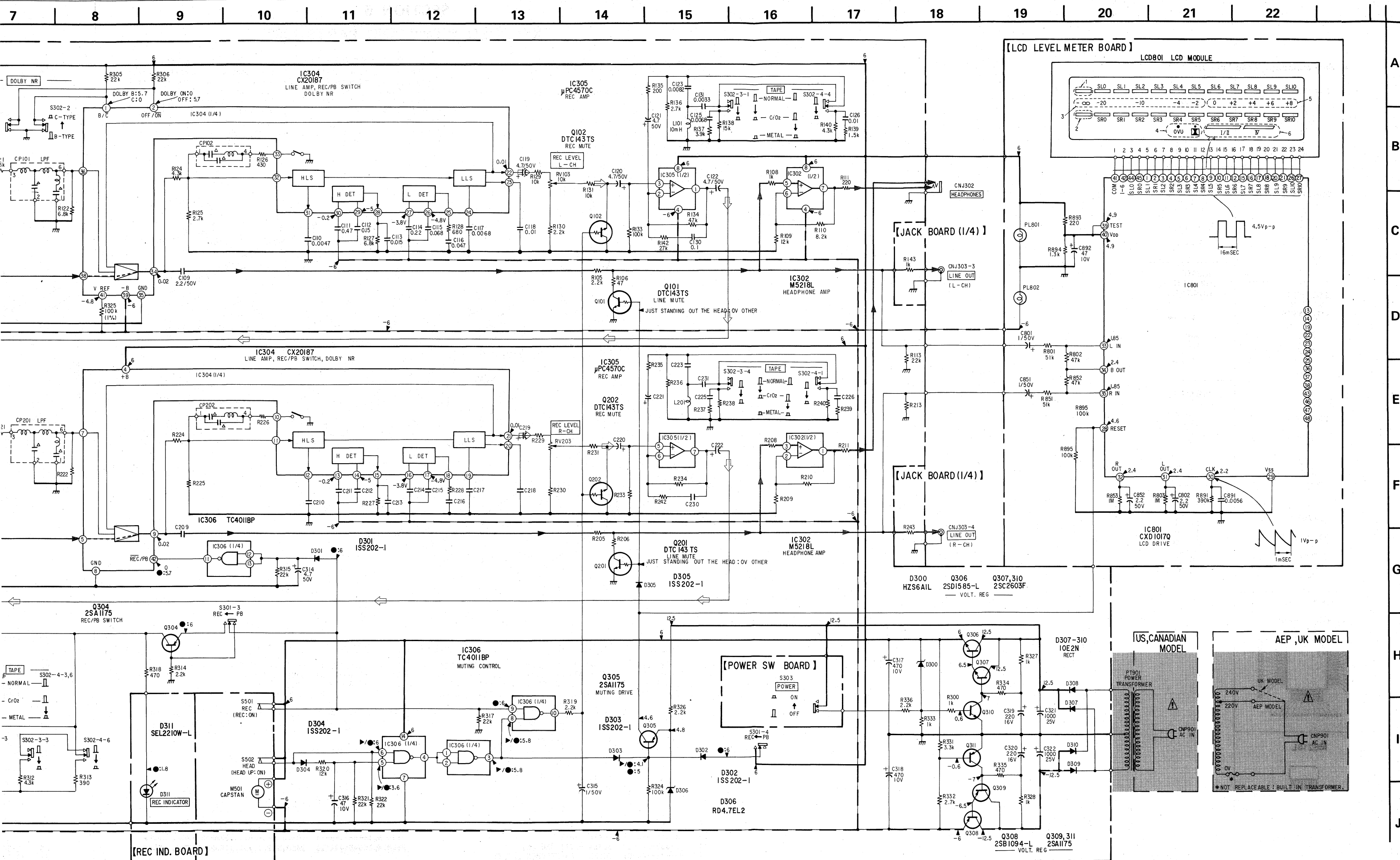
Ref. No.	Location
D300	B-12
D301	F-14
D302	F-15
D303	G-13
D304	G-13
D305	C-7
D306	B-8
D307	B-14
D308	C-15
D309	C-14
D310	C-15
D311	J-16
IC301	H-6
IC302	C-10
IC303	F-12
IC304	F-8
IC305	F-10
IC306	F-13
IC801	F-3
Q101	C-8
Q102	F-10
Q201	C-8
Q202	E-10
Q301	D-13
Q302	D-14
Q303	D-12
Q304	F-15
Q305	B-8
Q306	B-11
Q307	B-11
Q308	C-11
Q309	C-11
Q310	B-12
Q311	C-12











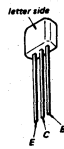




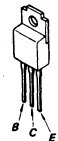


## ● Semiconductor Lead Layouts

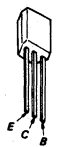
**2SA1175**



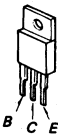
**2SB1094-L**



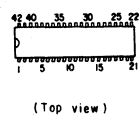
**2SC2603F  
2SC634SP  
DTC143TS**



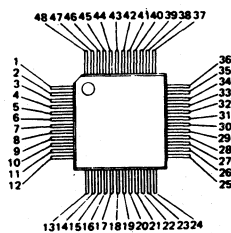
**2SD1585-L**



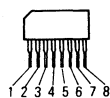
**CX20187**



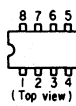
**CXD1017Q**



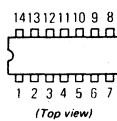
**M5218L**



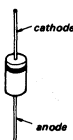
**M5220P  
μPC4570C**



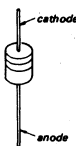
**TC4011BP**



**10E2N  
HZS6A1L  
RD4.7EL2**



**1SS202-1**



**SEL2210W-C**





## SECTION 5

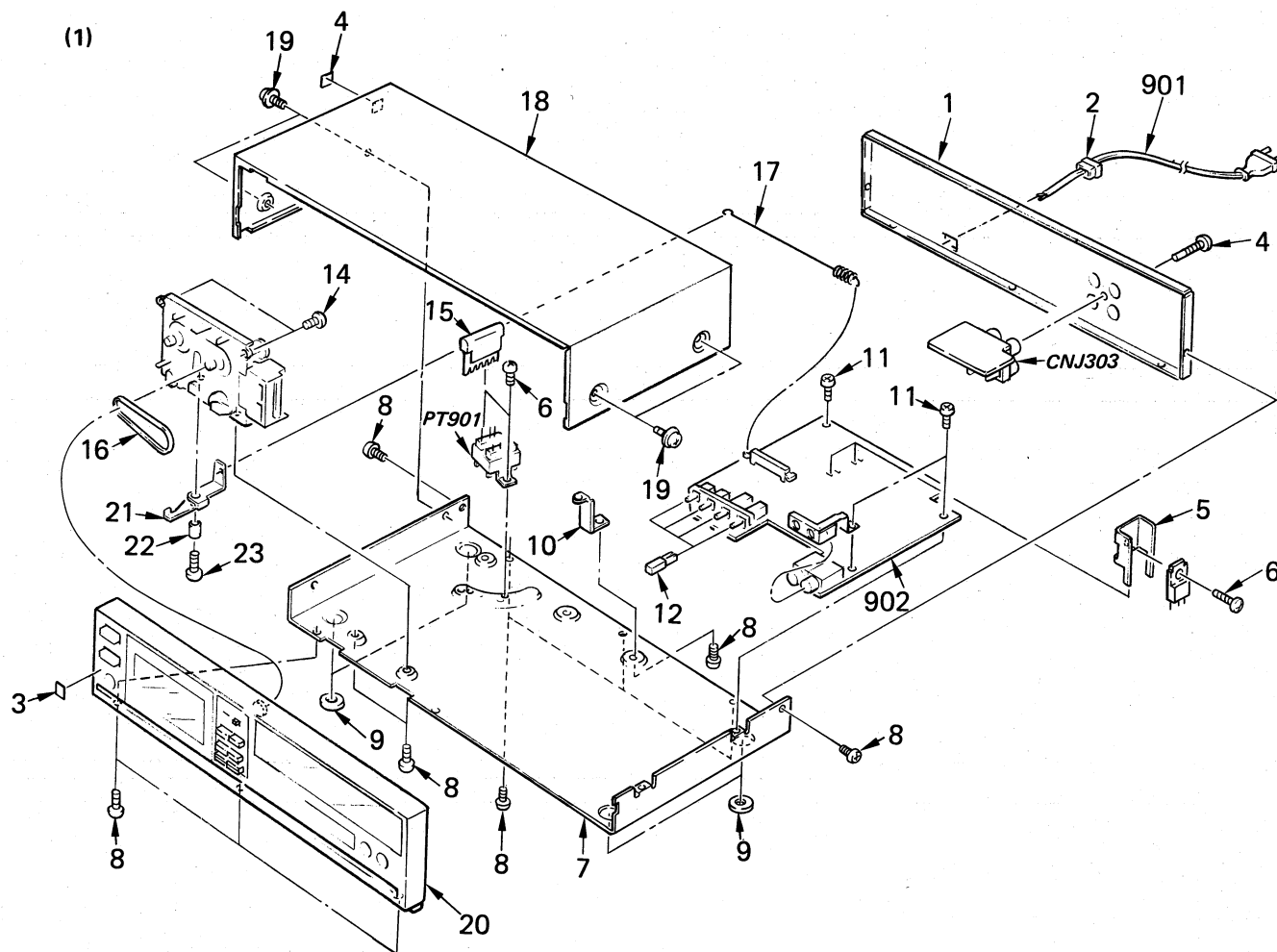
### EXPLODED VIEWS AND PARTS LIST

**NOTE:**






- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The construction parts of an assembled part are indicated with a collation number on the remark column.

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

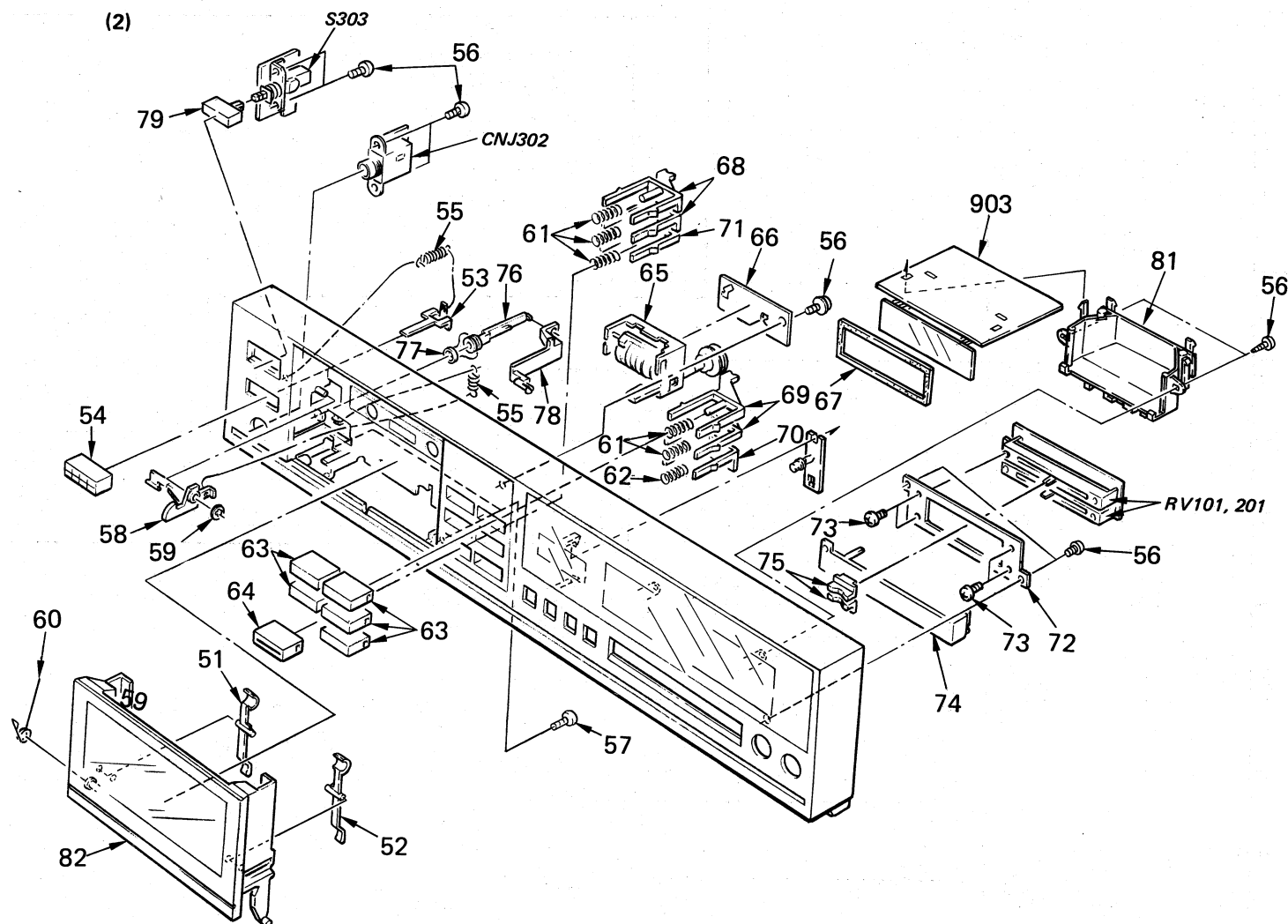
Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



No.	Part No.	Description	Remarks
1	*3-327-824-01 *3-327-824-11 *3-327-824-21 *3-327-824-31	(TC-FX430:US,Canadian)...PLATE, JACK (TC-FX430:AEP).....PLATE, JACK (TC-FX430:UK).....PLATE, JACK (TC-FX433:US).....PLATE, JACK	
2	3-703-244-00 3-703-571-00	(AEP,UK).....BUSHING, CORD (US,Canadian)...BUSHING (S)(4516), CORD	
3	3-703-713-41	STICKER, SONY SYMBOL (10)	
4	3-703-680-00	LABEL, CAUTION, SUB, NEW UL	
5	*4-886-555-00	HEAT SINK	
7	*3-318-948-41	CHASSIS	
8	7-685-872-01	SCREW +BVTT 3X8	
9	3-576-731-11	FELT (H)	
10	*3-318-936-11	BRACKET, PC BOARD	
11	3-703-249-01	SCREW, S TIGHT, +PTTWH 3X6	
12	4-855-804-11	KNOB, SQUARE	
13	*3-318-956-01	PLATE, SHIELD	
14	7-685-146-19	SCREW +BVTT 3X6 (S)	
15	*3-332-444-01	COVER, TRANSFORMER SAFETY	

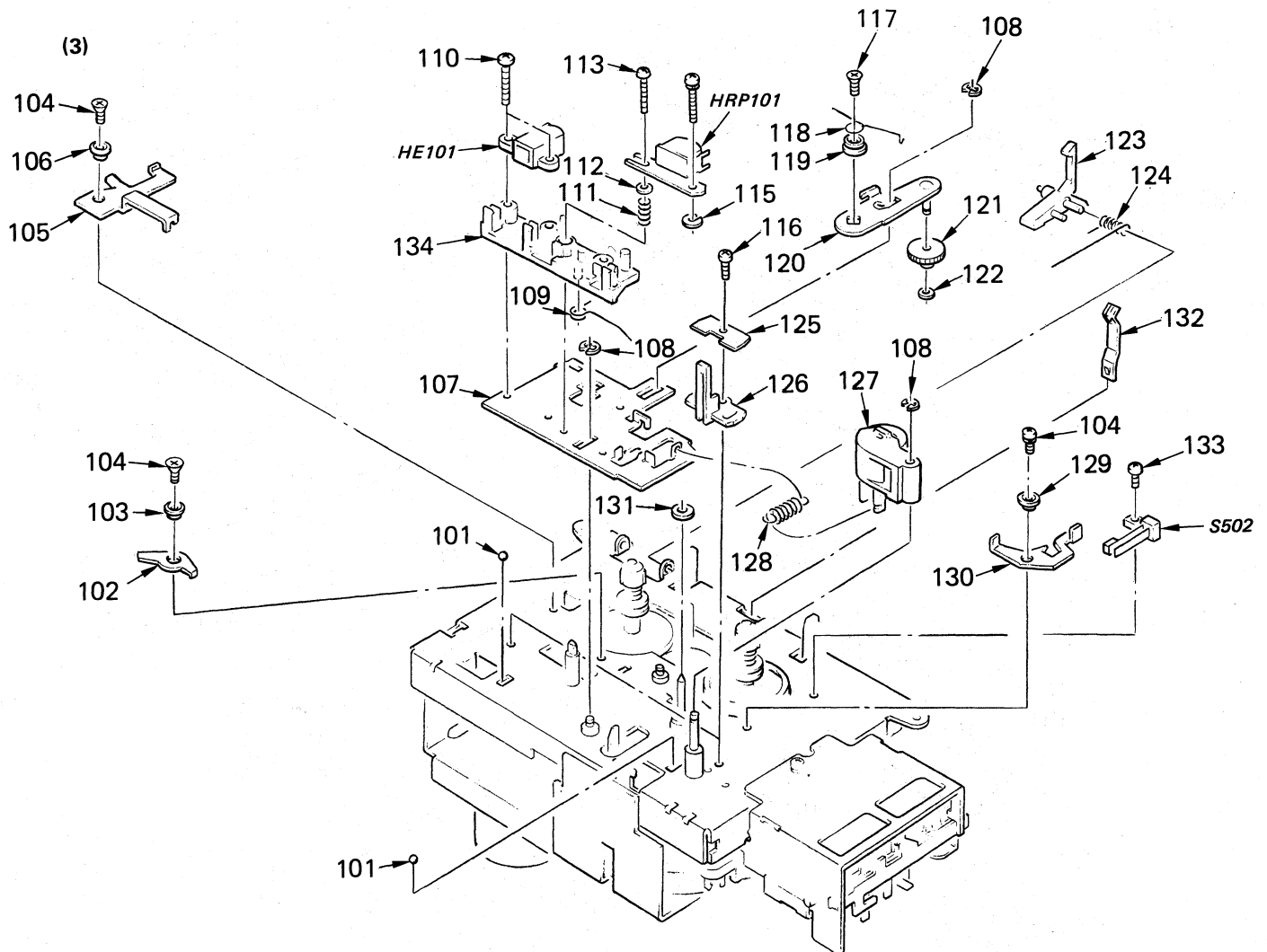
No.	Part No.	Description	Remarks
16	3-530-181-XX	BELT, DETCTING	
17	3-318-949-01	SPRING, TENSION	
18	3-318-998-41	CASE	
19	4-886-821-21	SCREW, M3 CASE STOPPER	
20	X-3318-940-2 X-3318-941-2 X-3318-942-2	(TC-FX430:US,Canadian)..FRONT PANEL, ASSY (AEP,UK).....FRONT PANEL, ASSY (TC-FX433:US)...FRONT PANEL, ASSY	
21	*3-318-935-01	LEVER, REC	
22	*3-318-942-01	SPACER, REC LEVER	
23	7-685-873-01	SCREW +BVTT 3X10 (S)	
901	 .1-534-817-XX  .1-551-628-00  .1-556-562-11	(AEP)....CORD, POWER, EURO PLUG (US,Canadian)...CORD, POWER (UK).....CORD, POWER	
902	*A-2056-331-A	PC BOARD ASSY, AUDIO	
PT901	 .1-448-489-11	(US,Canadian)...TRANSFORMER, POWER	
PT901	 .1-448-491-11	(AEP,UK).....TRANSFORMER, POWER	

# TC-FX430/FX433

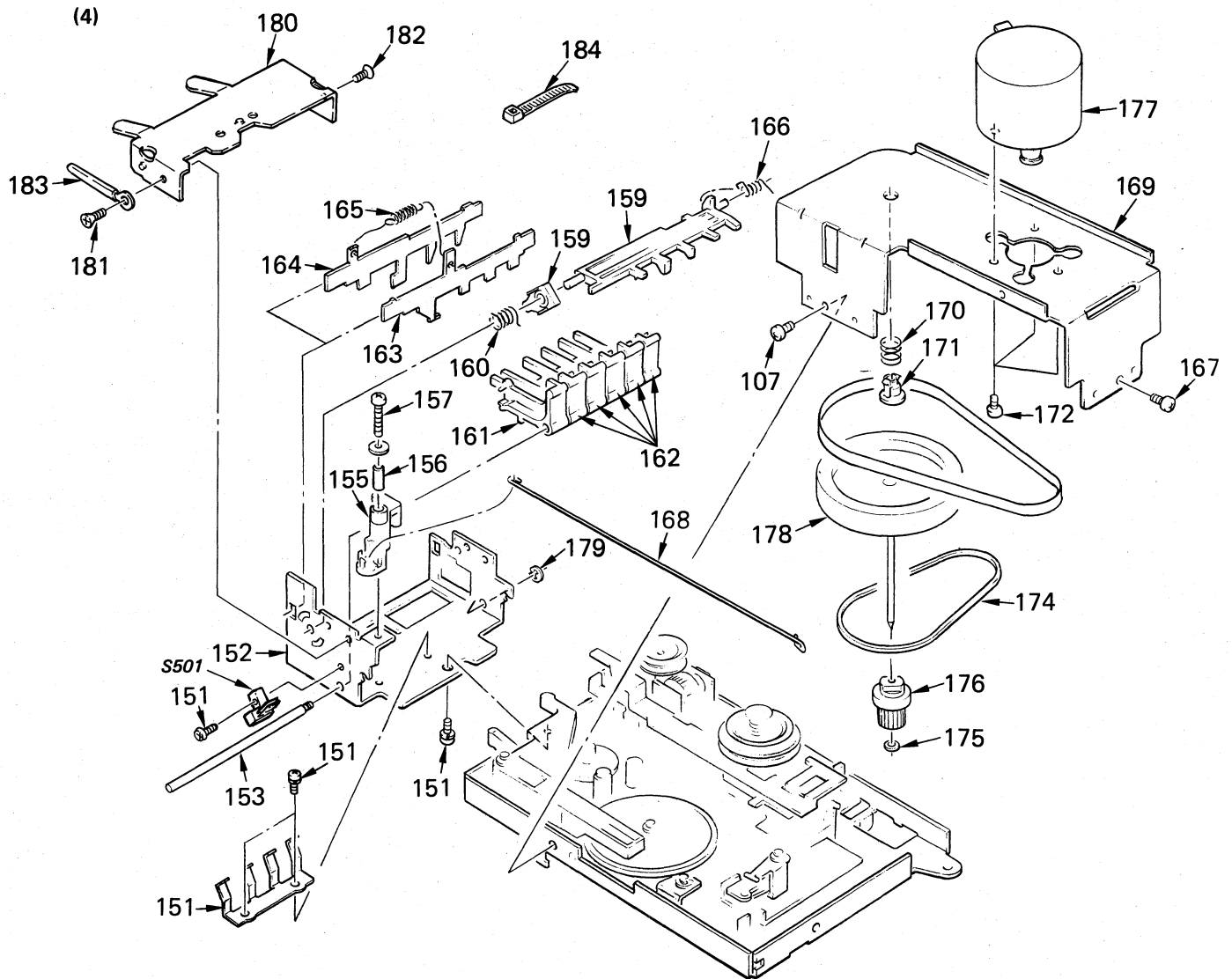


No.	Part No.	Description	Remarks
51	3-307-371-00	SPRING (LEFT)	
52	3-307-372-00	SPRING (RIGHT)	
53	3-313-203-00	PLATE, SLIDE	
54	3-304-419-31	BUTTON, EJECT	
55	3-540-244-00	SPRING, TENSION	
56	7-685-146-19	SCREW +BYTT 3X6 (S)	
57	7-687-245-11	SCREW +PTPWH 3X6	
58	*3-318-953-01	LEVER, LOCK	
59	7-624-190-11	STOP RING 3, TYPE-CS	
60	3-318-954-01	SPRING	
61	3-570-064-00	SPRING, COMPRESSION	
62	4-858-582-00	SPRING, COMPRESSION	
63	3-318-950-01	(TC-FX430)...BUTTON (A), CONTROL	
	3-318-950-21	(TC-FX433)...BUTTON (A), CONTROL	
64	3-318-950-11	(TC-FX430)...BUTTON (A), CONTROL	
	3-318-950-31	(TC-FX433)...BUTTON (A), CONTROL	
65	1-548-589-11	COUNTER, TAPE (MIDDLE TYPE)	
66	*3-327-821-01	BRACKET, COUNTER	

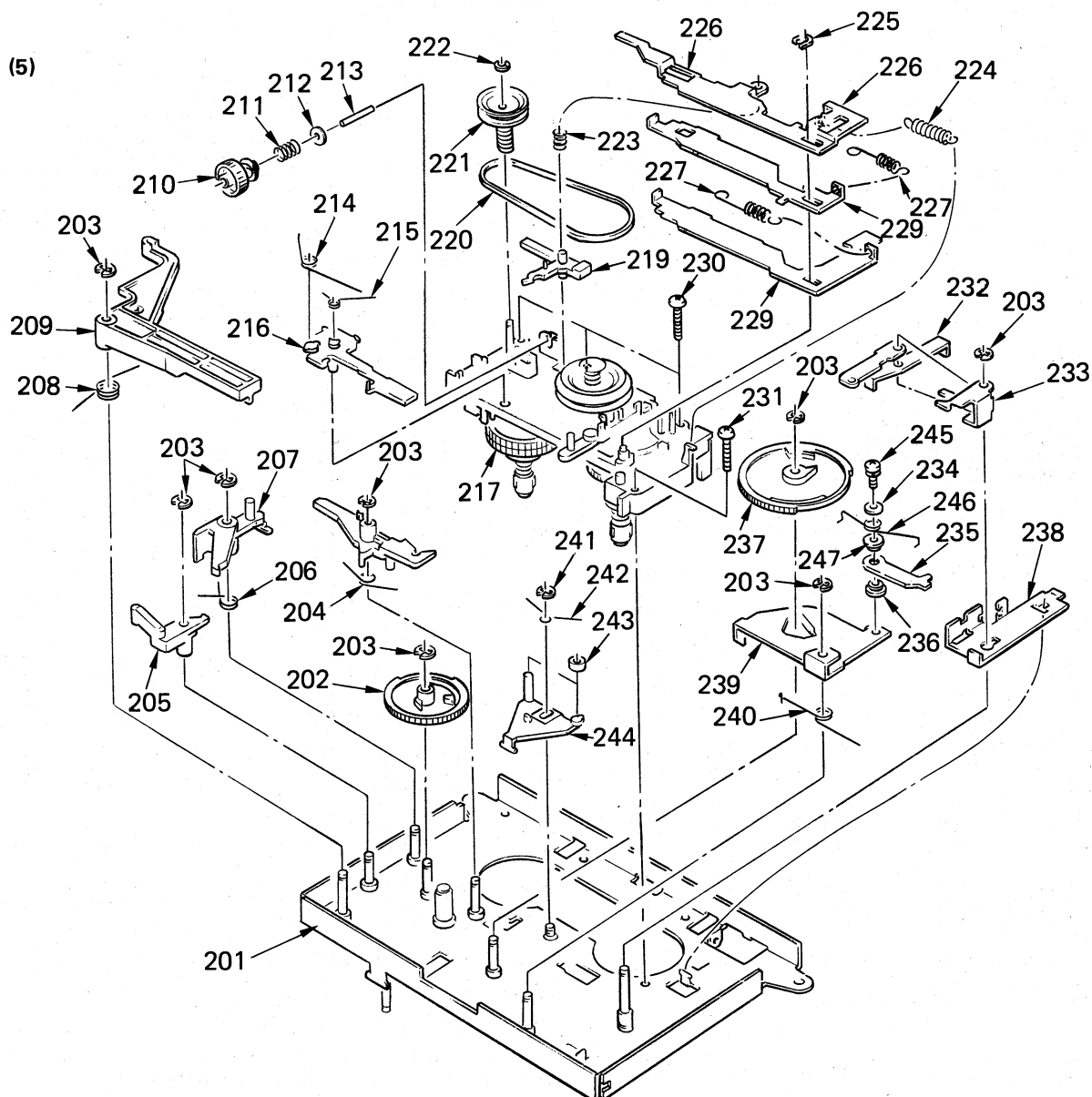
No.	Part No.	Description	Remarks
67	*3-332-449-01	CUSHION, DISPLAY	
68	*3-318-931-01	LEVER (A), BUTTON	
69	*3-318-932-01	LEVER (B), BUTTON	
70	*3-318-933-01	LEVER (C), BUTTON	
71	*3-318-934-01	LEVER (D), BUTTON	
72	*3-327-820-01	BRACKET (2), VOLUME	
73	7-621-255-15	SCREW +P 2X3	
74	3-327-826-11	PLATE, ORNAMENTAL, VOLUME	
75	3-313-213-31	BUTTON, REC CONTROL	
76	3-312-458-03	PISTON (A)	
77	3-312-441-00	RING, PISTON	
78	3-318-952-01	LEVER, EJECT	
79	3-332-417-11	KNOB (POWER), PUSH	
81	*3-332-423-01	HOUSE, LAMP	
82	A-2173-013-A	HOLDER ASSY, CASSETTE	
903	*1-618-741-11	PC BOARD, LCD LEVEL METER	
CNJ302	1-507-797-21	JACK, LARGE TYPE (HEAD PHONES)	
S303	1-570-103-11	SWITCH, PUSH (POWER)	



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	7-671-113-02	STEAL, BALL 3		119	3-596-145-01	COLLAR, TAKE-UP (80A)	
102	3-596-158-01	SHIFT (8A), BRAKE		120	X-3596-110-1	TAKE-UP ASSY (80A)	
103	3-596-185-01	COLLAR (2.6X4.5X1.1)		121	3-390-921-01	GEAR, TAKE-UP (8B)	
104	3-390-919-01	SCREW		122	3-596-177-01	LMW (1.7X3.2X0.25)	
105	*3-390-918-01	LEVER		123	3-596-125-01	SENSOR (8A), REC	
106	3-596-186-01	COLLAR (2.6X4.0X1.1)		124	3-596-119-01	SPRING	
107	3-596-181-01	PANEL (80A-EGC), HEAD		125	3-596-147-01	RETAINER (9D), PANEL	
108	3-596-172-01	RING, E		126	3-596-121-01	GUIDE (9A), CASSETTE	
109	3-390-921-01	SPRING		127	X-3596-101-1	PINCH ROLLER ASSY (8A)	
110	7-621-772-70	SCREW +B 2X14		128	3-596-103-01	SPRING	
111	3-596-117-01	SPRING		129	3-390-920-01	COLLAR (2.6X4.0X0.9)	
112	3-596-169-01	FW (2.2X6.0X0.4)		130	*3-596-179-01	ARM, PLAY SW	
113	3-596-165-01	BIND, +- 2X14		131	3-596-146-01	NLW (2.4X6.0X0.50)	
114	7-621-255-85	SCREW +P 2X14		132	3-596-151-01	PLATE (8A), SP, PACK RETAINER	
115	3-596-173-01	WASHER (0.10), HEAD		133	7-685-791-04	SCREW +PTT 2.6X5 (S)	
116	3-596-167-01	SCREW (2.6X6.5)		134	3-596-123-01	HEAD BASE	
117	7-627-452-38	SCREW, PRECISION +K 2X5		HRP101	8-825-510-30	HEAD (PP271-3602A)	
118	3-596-178-01	SP, TAKE-UP (80A)		S502	1-570-682-11	SWITCH, LEAF (HEAD)	



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
151	7-621-770-87	SCREW +P 2.6X5		169	*3-596-189-01	RETAINER, FLYWHEEL (80A-EGC)	
152	*3-390-901-01	FRAME (80A-EGC), PUSH BUTTON		170	3-596-101-01	RETAINER (SP) (9A), CAPSTAN	
153	*3-390-915-01	SHAFT, LEVER KEY (8B)		171	3-596-122-01	RETAINER (9A), CAPSTAN	
154	3-390-913-01	SP PLATE, LEVER KEY (8C)		172	3-596-166-01	SCREW (2.6X2.5)	
155	3-390-906-01	LEVER, REC CONTROL (8A)		173	3-596-184-01	BELT (60X4.5X0.5-68C), FLAT	
156	3-390-914-01	COLLAR, REC CONTROL (8A)		174	3-596-183-01	BELT (1.3X50-68C), SQUARE	
157	3-596-168-01	BIND		175	3-596-171-01	PSW (2.6X4.7X0.25)	
158	3-390-905-01	PLATE (8A), FUNCTION		176	3-596-133-01	GEAR, CAPSTAN (8A)	
159	3-390-904-01	CAM (8A), PAUSE		177	X-3596-112-1	MOTOR ASSY	
160	3-390-910-01	CAM (8B), SP PAUSE		178	X-3596-105-1	FLYWHEEL ASSY	
161	3-390-907-01	LEVER, PAUSE KEY (8A)		179	7-624-104-04	STOP RING 2.0, TYPE -E	
162	3-390-908-01	LEVER, KEY (8C)		180	3-390-924-01	BRACKET, AMS (8RA)	
163	*3-390-903-01	ARM		181	3-390-919-01	SCREW	
164	*3-390-902-01	ARM		182	7-621-559-20	SCREW +K 2.6X4	
165	3-390-912-01	SPRING		183	*3-596-198-01	CLIP	
166	3-390-911-01	PLATE (8B), FUNCTION, SP		184	*3-683-631-01	CLAMP	
167	7-685-791-04	SCREW +PTT 2.6X5 (S)		S501	1-570-683-11	SWITCH, LEAF (REC)	
168	3-390-909-01	REC, JOINT (8A)					



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
201	*X-3596-111-1	RIVETING ASSY (80A), CHASSIS		225	7-624-193-09	STOP RING (2.5) GRIP	
202	3-596-136-01	GEAR, RF DRIVE (8B)		226	*3-596-153-01	LEVER, AUTO (8A)	
203	3-596-172-01	RING, E		227	3-596-111-01	SPRING	
204	3-596-105-01	SPRING		228	*3-596-156-01	LEVER, REW (8B)	
205	3-596-128-01	LEVER, PAUSE TRIGGER (8A)		229	*3-596-155-01	LEVER, FF (8B)	
206	3-596-106-01	SPRING		230	3-596-168-01	BIND	
207	3-596-182-01	LEVER, RF TRIGGER (8A)		231	7-621-259-65	SCREW +P 2.6X10	
208	3-596-107-01	SPRING		232	*3-596-149-01	ARM, RP SWITCH (8A)	
209	3-390-923-01	LEVER, RP TRIGGER (8A)		233	*3-596-150-01	ARM, RP SHIFT (8A)	
210	X-3596-102-1	WORM ASSY (8RA), AUTO, GEAR		234	3-596-170-01	FW (2.8X7.5X0.5)	
211	3-596-115-01	SPRING		235	*3-596-154-01	LEVER, RP SELECT (8B)	
212	3-596-176-01	PSW (2.0X8.0X0.25)		236	3-596-143-01	COLLAR, RP SELECT (8A)	
213	3-596-144-01	SHAFT		237	3-596-137-01	GEAR, DRIVE (8B)	
214	3-596-110-01	SPRING		238	*3-596-188-01	LEVER, REC (80A)	
215	3-596-109-01	SPRING		239	*3-596-190-01	ARM, PLAY (80A-EGC)	
216	3-596-132-01	ARM, CANCEL (8A)		240	3-390-916-01	SP, ARM PLAY (80A)	
217	X-3596-109-1	BASE ASSY (80A), REEL TABLE		241	7-624-104-04	STOP RING 2.0, TYPE -E	
218	3-596-127-01	LEVER, RETURN (8A)		242	3-596-104-01	SPRING	
219	3-596-131-01	ARM, AUTO (8A)		243	3-596-135-01	RUBBER, BRAKE	
220	3-596-180-01	BELT (1.0X40-60C), SQUARE		244	3-596-126-01	ARM, BRAKE (8A)	
221	3-596-138-01	GEAR, RELAY PULLEY (8RA)		245	7-685-791-04	SCREW +PTT 2.6X5 (S)	
222	3-701-436-11	WASHER, 1.6		246	3-596-196-01	SELECT (80A), SP.PR	
223	3-596-114-01	SPRING		247	3-596-197-01	SELECT, COLLAR RP (80A)	
224	3-596-112-01	SPRING					

## SECTION 6 ELECTRICAL PARTS LIST

### NOTE:

- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

### CAPACITORS:

MF:μF, PF:μμF.

### RESISTORS

- All resistors are in ohms.
- F : nonflammable

### COILS

MMH : mH, UH : μH

### SEMICONDUCTORS

In each case, U : μ, for example:

UA....: μA...., UPA....: μPA...., UPC....: μPC,

UPD....: μPD....

The components identified by shading and mark **△** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **△** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

### ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	<b>△</b> 1-534-817-XX (AEP).....CORD, POWER, EURO PLUG	
	<b>△</b> 1-551-628-00 (US,Canadian)...CORD, POWER	
	<b>△</b> 1-556-562-11 (UK).....CORD, POWER	
902	*A-2056-331-A	PC BOARD ASSY, AUDIO
903	*1-618-741-11	PC BOARD, LCD LEVEL METER
C101	1-124-903-00	ELECT 1MF 20% 50V
C102	1-162-290-31	CERAMIC 470PF 10% 50V
C103	1-124-927-11	ELECT 4.7MF 20% 50V
C104	1-162-107-00	CERAMIC 560PF 10% 50V
C105	1-136-157-00	FILM 0.022MF 5% 50V
C106	1-123-380-00	ELECT 1MF 20% 50V
C107	1-162-112-00	CERAMIC 0.0047MF 30% 25V
C108	1-124-904-00	ELECT 2.2MF 20% 50V
C109	1-124-183-00	ELECT 2.2MF 20% 50V
C110	1-110-203-00	MYLAR 0.0047MF 5% 50V
C111	1-136-173-00	FILM 0.47MF 5% 50V
C112	1-136-167-00	FILM 0.15MF 5% 50V
C113	1-136-155-00	FILM 0.015MF 5% 50V
C114	1-136-169-00	FILM 0.22MF 5% 50V
C115	1-136-163-00	FILM 0.068MF 5% 50V
C116	1-136-161-00	FILM 0.047MF 5% 50V
C117	1-110-205-00	MYLAR 0.0068MF 5% 50V
C118	1-136-153-00	FILM 0.01MF 5% 50V
C119	1-124-927-11	ELECT 4.7MF 20% 50V
C120	1-124-927-11	ELECT 4.7MF 20% 50V
C121	1-124-927-11	ELECT 4.7MF 20% 50V
C122	1-124-927-11	ELECT 4.7MF 20% 50V
C123	1-110-206-00	MYLAR 0.0082MF 5% 50V
C125	1-110-205-00	MYLAR 0.0068MF 5% 50V
C126	1-136-153-00	FILM 0.01MF 5% 50V
C128	1-136-273-91	FILM 75PF 5% 630V
C129	1-162-105-00	CERAMIC 390PF 10% 50V
C130	1-136-165-00	FILM 0.1MF 5% 50V
C131	1-110-201-00	MYLAR 0.0033MF 5% 50V
C301	1-161-494-00	CERAMIC 0.022MF 30% 25V
C302	1-124-443-00	ELECT 100MF 20% 10V
C303	1-124-443-00	ELECT 100MF 20% 10V
C304	1-124-443-00	ELECT 100MF 20% 10V
C305	1-124-443-00	ELECT 100MF 20% 10V
C307	1-129-713-00	FILM 0.0082MF 10% 630V
C308	1-130-295-00	FILM 0.0082MF 5% 100V
C309	1-130-287-00	FILM 0.0039MF 5% 100V
C310	1-130-287-00	FILM 0.0039MF 5% 100V
C311	1-123-369-00	ELECT 4.7MF 20% 50V

### ELECTRICAL PARTS


Ref.No.	Part No.	Description
C312	1-123-369-00	ELECT 4.7MF 20% 50V
C313	1-124-902-00	ELECT 0.47MF 20% 50V
C314	1-124-927-11	ELECT 4.7MF 20% 50V
C315	1-124-903-00	ELECT 1MF 20% 50V
C316	1-124-892-00	ELECT 47MF 20% 10V
C317	1-124-472-11	ELECT 470MF 20% 10V
C318	1-124-472-11	ELECT 470MF 20% 10V
C319	1-123-321-00	ELECT 220MF 20% 16V
C320	1-123-321-00	ELECT 220MF 20% 16V
C321	1-124-557-11	ELECT 1000MF 20% 25V
C322	1-124-557-11	ELECT 1000MF 20% 25V
C801	1-124-903-00	ELECT 1MF 20% 50V
C802	1-124-904-00	ELECT 2.2MF 20% 50V
C851	1-124-903-00	ELECT 1MF 20% 50V
C852	1-124-904-00	ELECT 2.2MF 20% 50V
C891	1-110-204-00	MYLAR 0.0056MF 5% 50V
C892	1-124-892-00	ELECT 47MF 20% 10V
CNJ301	1-507-982-11	JACK (LARGE TYPE)(MIC)
CNJ302	1-507-797-21	JACK, LARGE TYPE (HEAD PHONES)
CNJ303	1-507-907-11	JACK, PIN 4P (LINE IN/OUT)
CNP301*1	1-564-505-11	PLUG, CONNECTOR 2P
CNP302*1	1-564-509-11	PLUG, CONNECTOR 6P
CNP303*1	1-564-509-11	PLUG, CONNECTOR 6P
CNP801*1	1-564-521-11	PLUG, CONNECTOR 6P
CP101	1-231-388-00	FILTER, LOW PASS
CP102	1-235-186-00	ENCAPSULATED COMPONENT
CP201	1-231-388-00	FILTER, LOW PASS
CP202	1-235-186-00	ENCAPSULATED COMPONENT
CT301	1-141-225-00	CAP, TUNING, TRIMAR
D300	8-719-910-61	DIODE HZS6A1L
D301	8-719-107-94	DIODE 1SS202-1
D302	8-719-107-94	DIODE 1SS202-1
D303	8-719-107-94	DIODE 1SS202-1
D304	8-719-107-94	DIODE 1SS202-1
D305	8-719-107-94	DIODE 1SS202-1
D306	8-719-101-47	DIODE RD4.7EL2
D307	8-719-200-77	DIODE 10E2N
D308	8-719-200-77	DIODE 10E2N
D309	8-719-200-77	DIODE 10E2N
D310	8-719-200-77	DIODE 10E2N
D311	8-719-302-74	DIODE SEL2210W-L
HRP101	8-825-510-30	HEAD (PP271-3602A)
IC301	8-759-600-02	IC M5218L
IC302	8-759-600-02	IC M5218L
IC303	8-759-602-01	IC M5220P


## ELECTRICAL PARTS

Ref.No.	Part No.	Description
IC304	8-752-018-70	IC CX20187
IC305	8-759-106-41	IC UPC4570C
IC306	8-759-240-11	IC TC4011BP
IC801	8-752-321-65	IC CXD1017Q
L101	1-408-924-00	MICRO INDUCTOR 10MMH
L102	1-408-929-00	MICRO INDUCTOR 27MMH
L201	1-408-924-00	MICRO INDUCTOR 10MMH
L202	1-408-929-00	MICRO INDUCTOR 27MMH
LCD801	1-520-488-11	METER, LEVEL
PL801	1-518-596-11	LAMP, PILOT
PL802	1-518-596-11	LAMP, PILOT
PT901A	1-448-489-11	(US,Canadian)...TRANSFORMER, POWER
PT901A	1-448-491-11	(AEP,UK).....TRANSFORMER, POWER
Q101	8-729-900-74	TRANSISTOR DTC143TS
Q102	8-729-900-74	TRANSISTOR DTC143TS
Q201	8-729-900-74	TRANSISTOR DTC143TS
Q202	8-729-900-74	TRANSISTOR DTC143TS
Q301	8-729-600-28	TRANSISTOR 2SC634SP-8
Q302	8-729-600-28	TRANSISTOR 2SC634SP-8
Q303	8-729-606-33	TRANSISTOR 2SC2603F
Q304	8-729-111-54	TRANSISTOR 2SA1175
Q305	8-729-111-54	TRANSISTOR 2SA1175
Q306	8-729-107-25	TRANSISTOR 2SD1585-L
Q307	8-729-606-33	TRANSISTOR 2SC2603F
Q308	8-729-111-67	TRANSISTOR 2SB1094-L
Q309	8-729-117-54	TRANSISTOR 2SA1175
Q310	8-729-606-33	TRANSISTOR 2SC2603F
Q311	8-729-117-54	TRANSISTOR 2SA1175
R101	1-247-167-00	CARBON 33K 5% 1/4W
R102	1-249-429-11	CARBON 10K 5% 1/6W
R103	1-247-821-00	CARBON 390 5% 1/6W
R104	1-247-867-00	CARBON 33K 5% 1/6W
R105	1-249-421-11	CARBON 2.2K 5% 1/6W
R106	1-247-799-00	CARBON 47 5% 1/6W
R108	1-247-831-00	CARBON 1K 5% 1/6W
R109	1-247-857-00	CARBON 12K 5% 1/6W
R110	1-247-853-00	CARBON 8.2K 5% 1/6W
R111	1-247-815-00	CARBON 220 5% 1/6W
R113	1-249-433-11	CARBON 22K 5% 1/6W
R114	1-247-887-00	CARBON 220K 5% 1/6W
R115	1-247-807-00	CARBON 100 5% 1/6W
R116	1-247-882-00	CARBON 130K 5% 1/6W
R117	1-247-849-00	CARBON 5.6K 5% 1/6W
R118	1-247-857-00	CARBON 12K 5% 1/6W
R119	1-247-859-00	CARBON 15K 5% 1/6W
R120	1-247-887-00	CARBON 220K 5% 1/6W

## ELECTRICAL PARTS

Ref.No.	Part No.	Description
R121	1-247-719-11	CARBON 3.3K 5% 1/4W
R122	1-247-151-00	CARBON 6.8K 5% 1/4W
R124	1-246-488-00	CARBON 4.3K 5% 1/4W
R125	1-247-718-11	CARBON 2.7K 5% 1/4W
R126	1-247-822-00	CARBON 430 5% 1/6W
R127	1-247-851-00	CARBON 6.8K 5% 1/6W
R128	1-247-827-00	CARBON 680 5% 1/6W
R129	1-249-429-11	CARBON 10K 5% 1/6W
R130	1-249-421-11	CARBON 2.2K 5% 1/6W
R131	1-249-429-11	CARBON 10K 5% 1/6W
R133	1-247-879-00	CARBON 100K 5% 1/6W
R134	1-249-437-11	CARBON 47K 5% 1/6W
R135	1-247-114-00	CARBON 200 5% 1/4W
R136	1-247-841-00	CARBON 2.7K 5% 1/6W
R137	1-247-845-00	CARBON 3.9K 5% 1/6W
R138	1-247-859-00	CARBON 15K 5% 1/6W
R139	1-247-835-00	CARBON 1.5K 5% 1/6W
R140	1-247-846-00	CARBON 4.3K 5% 1/6W
R141	1-249-459-11	CARBON 12K 5% 1/4W
R142	1-249-434-11	CARBON 27K 5% 1/6W
R143	1-247-713-11	CARBON 1K 5% 1/4W
R144	1-247-713-11	CARBON 1K 5% 1/4W
R300	1-247-713-11	CARBON 1K 5% 1/4W
R303	1-247-708-11	CARBON 470 5% 1/4W
R304	1-247-708-11	CARBON 470 5% 1/4W
R305	1-249-433-11	CARBON 22K 5% 1/6W
R306	1-249-433-11	CARBON 22K 5% 1/6W
R307	1-247-688-11	CARBON 10 5% 1/4W
R308	1-249-433-11	CARBON 22K 5% 1/6W
R309	1-249-433-11	CARBON 22K 5% 1/6W
R310	1-249-429-11	CARBON 10K 5% 1/6W
R311	1-247-854-00	CARBON 9.1K 5% 1/6W
R312	1-247-846-00	CARBON 4.3K 5% 1/6W
R313	1-247-821-00	CARBON 390 5% 1/6W
R314	1-249-421-11	CARBON 2.2K 5% 1/6W
R315	1-249-433-11	CARBON 22K 5% 1/6W
R317	1-249-433-11	CARBON 22K 5% 1/6W
R318	1-247-708-11	CARBON 470 5% 1/4W
R319	1-249-421-11	CARBON 2.2K 5% 1/6W
R320	1-247-857-00	CARBON 12K 5% 1/6W
R321	1-249-433-11	CARBON 22K 5% 1/6W
R322	1-249-433-11	CARBON 22K 5% 1/6W
R324	1-247-879-00	CARBON 100K 5% 1/6W
R325	1-215-469-00	METAL 100K 1% 1/6W
R326	1-247-717-11	CARBON 2.2K 5% 1/4W

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



ELECTRICAL PARTS

<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>			
R327	1-247-713-11	CARBON	1K	5%	1/4W
R328	1-247-713-11	CARBON	1K	5%	1/4W
R331	1-247-719-11	CARBON	3.3K	5%	1/4W
R332	1-247-718-11	CARBON	2.7K	5%	1/4W
R333	1-247-713-11	CARBON	1K	5%	1/4W
R334	1-247-708-11	CARBON	470	5%	1/4W
R335	1-247-708-11	CARBON	470	5%	1/4W
R336	1-247-717-11	CARBON	2.2K	5%	1/4W
R801	1-247-872-00	CARBON	51K	5%	1/6W
R802	1-249-437-11	CARBON	47K	5%	1/6W
R803	1-247-903-00	CARBON	1M	5%	1/6W
R851	1-247-872-00	CARBON	51K	5%	1/6W
R852	1-249-437-11	CARBON	47K	5%	1/6W
R853	1-247-903-00	CARBON	1M	5%	1/6W
R891	1-247-893-00	CARBON	390K	5%	1/6W
R893	1-247-815-00	CARBON	220	5%	1/6W
R894	1-247-834-00	CARBON	1.3K	5%	1/6W
R895	1-247-879-00	CARBON	100K	5%	1/6W
RV101	1-237-208-11	RES, VAR, SLIDE 20K (REC VOL)			
RV102	1-228-994-00	RES, ADJ, CARBON 10K			
RV103	1-228-994-00	RES, ADJ, CARBON 10K			
RV201	1-237-208-11	RES, VAR, SLIDE 20K (REC VOL)			
RV202	1-228-994-00	RES, ADJ, CARBON 10K			
RV203	1-228-994-00	RES, ADJ, CARBON 10K			
S301	1-554-033-00	SWITCH, SLIDE (REC/PB)			
S302	1-570-526-11	SWITCH, PUSH (4 KEY)(DOLBY NR,TAPE)			
S303	1-570-103-11	SWITCH, PUSH (1 KEY)(POWER)			
S501	1-570-683-11	SWITCH, LEAF (REC)			
S502	1-570-682-11	SWITCH, LEAF (HEAD)			
T301	1-433-303-11	TRANSFORMER, BIAS OSCILLATION			

ACCESSORY & PACKING MATERIAL

<u>Part No.</u>	<u>Description</u>
1-551-734-11	CORD, CONNECTION (RK-74A)
3-318-957-11	(TC-FX430)...INDIVIDUAL CARTON
3-318-957-21	(TC-FX433)...INDIVIDUAL CARTON
3-701-630-00	BAG, POLYETHYLENE
3-703-450-01	INSTRUCTION
3-760-404-11	(Canadian).....MANUAL, INSTRUCTION
3-765-233-11	(Canadian,AEP,UK)...MANUAL, INSTRUCTION
3-765-233-21	(US)... ..MANUAL, INSTRUCTION
3-765-233-41	(AEP).....MANUAL, INSTRUCTION